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| 09/721,763 | 11/27/2000 | Toshihiro Sugaya | 200148US-2S | 3903 |

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| EXAMINER | |
|---|---|
| LE, KIMLIEN T | |

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Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/721,763 | SUGAYA ET AL. | |
| | Examiner | Art Unit | |
| | Kimlien T Le | 2653 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *26 December 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Flannagan et al (U.S. Patent 4,827,462).

Regarding claim 1, see Figs. 1 and 2 of Flannagan et al which show a disk-shaped information recording medium comprising: spiral tracks (Fig. 2, element 22; See also column 5, lines 15-20); and at least one index header (Fig. 2, element 23; See also column 6, lines 10-20) which is aligned in a radial direction of a disk (Fig. 2, element 20; See also column 5, lines 10-20) to partially intercept the spiral tracks.

Regarding claim 3, see Figs. 1 and 2 of Flannagan et al which show a medium according to claim 1, wherein the index header has, along a track direction, a plurality of index header areas corresponding to respective rounds of tracks of the spiral tracks (Fig. 2; See also column 5, lines 15-20).

Regarding claim 4, see Figs. 1 and 2 of Flannagan et al which show a medium according to claim 3, wherein each of the index header areas is allocated on an extended line of the corresponding round of track, and has address data of the corresponding round of track (Fig. 2; See also column 5, lines 15-20).

Regarding claim 5, see Figs. 1 and 2 of Flannagan et al which show a medium according to claim 3, herein each of the index header areas has a plurality of header parts, a predetermined header part 1 of the plurality of header parts of the index header area corresponding to the n-th round of track of the spiral tracks has address data, a predetermined header part 2 of the plurality of header parts of the index header area corresponding to the (n+1) th round of track of the spiral tracks has address data, and the header parts 1 and 2 are allocated at different positions in the radial direction (Fig. 2; See also column 5, lines 15-20).

Regarding claim 6, see Figs. 1 and 2 of Flannagan et al which show a medium according to claim 1, wherein the spiral tracks have a plurality of recording fields each having a predetermined track length each of the recording fields has a header field and data field, the header field records address data, and the data field records user data (Fig. 2; See also column 5, lines 15-20).

Regarding claim 7, see Figs. 1 and 2 of Flannagan et al which show a medium according to claim 6, wherein a specific one of the recording fields is allocated to extend across the index header, the specific recording field has first and second sub recording fields to have the index header as a boundary, and the first and second sub recording fields respectively have connection fields for connecting the two sub recording fields (Fig. 2; See also column 5, lines 15-20).

Regarding claim 8, see Figs. 1 and 2 of Flannagan et al which show a medium according to claim 7, wherein the first sub recording field has a first header field, the connection field of the second sub recordingfield has a second header field, and the first and second header fields record identical address data the first and second header fields record identical address data (Fig. 2; See also column 5, lines 15-20).

Regarding claim 9, see Figs. 1 and 2 of Flannagan et al which show a medium according to claim 1, wherein the information recording medium has a plurality of concentric zones, and each of the zones includes the spiral tracks which are wobbled (Fig. 2; See also column 5, lines 15-20).

Regarding claim 10, see Figs. 1 and 2 of Flannagan et al which show a medium according to claim 9, wherein the number of wobbles per round of spiral tracks included in a specific zone is identical, and a disk rotational speed upon accessing the specific zone and a frequency upon recording data on the specific zone can be determined on the basis of a frequency reproduced from the wobbles of the spiral tracks (Fig. 2; See also column 5, lines 15-20).

Regarding claim 11, see Figs. 1 and 2 of Flannagan et al which show a medium according to claim 1, wherein the spiral tracks are alternately switched to land and groove shaped tracks in units of rounds, and the index header is aligned at only a boundary between the land and groove-shaped tracks (Fig. 2; See also column 5, lines 15-20).

Regarding claim 12, see Figs. 1 and 2 of Flannagan et al which show a medium according to claim 6, wherein the address data recorded as an embossed pattern in the index header is used before the recording fields are allocated on the spiral tracks, or is additionally used after the recording fields are allocated on the spiral tracks, and the address data recorded in the header field in the recording field is used after that recording field is allocated on the spiral track (Fig. 2; See also column 5, lines 15-20).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flannagan et al (U.S. Patent 4,827,462) in view of Carré et al (U.S. Patent 4,020,278).

With regard to claim 2, Flannagan et al shows all the features of claim 2, except that the index header has address data recorded as an embossed pattern. However, Carré et al teaches that information is recorded in the form of an embossed pattern (Fig. 1; See also column 2, lines 30-35). Therefore, it would have been obvious to provide Flannagan et al with address data recorded as an embossed pattern as taught by Carré et al. The rationale is as follows: one of ordinary skill in the art at the time of the invention would have been motivated to provide Flannagan et al with address data recorded as an embossed pattern as taught by Carré et al, in order to detect the position.

With regard to claim 13, Flannagan et al shows an information recording apparatus for recording information on a disk-shaped information recording medium which comprises: spiral tracks (Fig. 2, element 22; See also column 5, lines 15-20); and at least one index header (Fig. 2, element 23; See also column 6, lines 10-20) which is aligned in a radial direction of a disk to partially intercept the spiral tracks, the apparatus comprising: recording means (Fig. 1, element 13; See also column 10, lines 35-50) for recording a recording field having a header field and data field on the spiral tracks, and recording address data of the recording field in the header field. Flannagan et al does not show the index header has address data recorded as an embossed pattern. However, Carré et al teaches that information is recorded in the form of an embossed

pattern (Fig. 1; See also column 2, lines 30-35). Therefore, it would have been obvious to provide Flannagan et al with address data recorded as an embossed pattern as taught by Carré et al. The rationale is as follows: one of ordinary skill in the art at the time of the invention would have been motivated to provide Flannagan et al with address data recorded as an embossed pattern as taught by Carré et al, in order to detect the position.

Regarding claim 14, see Figs. 1 and 2 of Flannagan et al which show an apparatus according to claim 13, further comprising data recording means for recording target data in the data field of the recording field on the basis of the address data recorded in the header field after the recording means records the address data in the header field of the recording field (Fig. 2; See also column 5, lines 15-20).

Regarding claim 15, see Figs. 1 and 2 of Flannagan et al which show a apparatus according to claim 13, further comprising data recording means for recording target data in the data field of the recording field on the basis of the address data recorded in the header field without rewriting the address data recorded in the header field after the recording means records the address data in the header field of the recording field (Fig. 2; See also column 5, lines 15-20).

Regarding claim 16, see Figs. 1 and 2 of Flannagan et al which show an apparatus according to claim 13, wherein the information recording medium has a plurality of concentric zones, each of the zones includes the spiral tracks which are wobbled, the number of wobbles per round of spiral tracks included in a specific zone is identical, the spiral tracks alternately have land and groove-shaped tracks in units of rounds, the index header is aligned at only a boundary between the land- and groove-shaped tracks, and the apparatus further comprises: tracking

control means(Fig. 1, element 15; See also column 4, lines 45-65) for controlling tracking to make a light beam track the land- and groove-shaped tracks by detecting the index header; first control means (Fig. 1, element 15; See also column 4, lines 45-65) for controlling a disk rotational speed upon accessing a specific zone on the basis of a frequency reproduced from wobbles of the spiral tracks included in the specific zone; and second control means (Fig. 1, element 15; See also column 4, lines 45-65)for controlling a frequency of data recording with respect to a specific zone on the basis of a frequency reproduced from wobbles of the spiral tracks included in the specific zone (Fig. 3; See also column 8, lines 50-57).

With regard to claim 17, Flannagan et al shows an information recording method for recording information on a disk-shaped information recording medium which comprises: spiral tracks (Fig. 2, element 22; See also column 5, lines 15-20); and at least one index header (Fig. 2, element 23; See also column 6, lines 10-20) which is aligned in a radial direction of a disk to partially intercept the spiral tracks, and in which address data of a track is recorded as an embossed pattern, the method comprising the step of: recording a recording field having a header field and data field on the spiral tracks, and recording address data of the recording field in the header field (Fig. 1; See also column 10, lines 35-50). Flannagan et al does not show the index header has address data recorded as an embossed pattern. However, Carré et al teaches that information is recorded in the form of an embossed pattern (Fig. 1; See also column 2, lines 30-35). Therefore, it would have been obvious to provide Flannagan et al with address data recorded as an embossed pattern as taught by Carré et al. The rationale is as follows: one of ordinary skill in the art at the time of the invention would have been motivated to provide Flannagan et al with

address data recorded as an embossed pattern as taught by Carré et al, in order to detect the position.

Regarding claim 18, see Figs. 1 and 2 of Flannagan et al which show a method according to claim 17, further comprising the step of recording target data in the data field of the recording field on the basis of the address data recorded in the header field after the address data is recorded in the header field of the recording field (Fig. 2; See also column 5, lines 15-20).

Regarding claim 19, see Figs. 1 and 2 of Flannagan et al which show a method according to claim 17, further comprising the step of recording target data in the data field of the recording field on the basis of the address data recorded in the header field without rewriting the address data recorded in the header field after the address data is recorded in the header field of the recording field (Fig. 2; See also column 5, lines 15-20).

Regarding claim 20, see Figs. 1 and 2 of Flannagan et al which show a method according to claim 17, wherein the information recording medium has a plurality of concentric zones, each of the zones includes the spiral tracks which are wobbled, the number of wobbles per round of spiral tracks included in a specific zone is identical, the spiral tracks alternately have land and groove-shaped tracks in units of rounds, the index header is aligned at only a boundary between the land- and groove-shaped tracks, and the method further comprises the steps of: controlling tracking to make a light beam track the land and groove shaped tracks by detecting the index header; controlling a disk rotational speed upon accessing a specific zone on the basis of a frequency reproduced from wobbles of the spiral tracks included in the specific zone; and controlling a frequency of data recording with respect to a specific zone on the basis of a

frequency reproduced from wobbles of the spiral tracks included in the specific zone(Fig. 2; See also column 5, lines 15-20).

With regard to claim 21, Flannagan et al shows an information reproduction apparatus for reproducing information from a disk-shaped information recording medium which comprises: wobbled spiral tracks (Fig. 2, element 22; See also column 5, lines 15-20); and at least one index header (Fig. 2, element 23; See also column 6, lines 10-20) which is aligned in a radial direction of a disk to partially intercept the spiral tracks, and in which the spiral tracks have a plurality of recording fields each having a predetermined track length (column 12, lines 1-10), each recording field has a header field and data field, the header field records address data, and the data field records user data, the apparatus comprising: data reproduction means (Fig. 1, element 13; See also column 10, lines 35-50) for reproducing target data recorded in the data field of the recording field on the basis of the address data recorded in the header field of the recording field. Flannagan et al does not show the index header has address data recorded as an embossed pattern. However, Carré et al teaches that information is recorded in the form of an embossed pattern (Fig. 1; See also column 2, lines 30-35). Therefore, it would have been obvious to provide Flannagan et al with address data recorded as an embossed pattern as taught by Carré et al. The rationale is as follows: one of ordinary skill in the art at the time of the invention would have been motivated to provide Flannagan et al with address data recorded as an embossed pattern as taught by Carré et al, in order to detect the position.

Regarding claim 22, see Figs. 1 and 2 of Flannagan et al which show an apparatus according to claim 21, wherein the information recording medium has a plurality of

concentric zones, each of the zones includes the wobbled spiral tracks, the number of wobbles per round of spiral tracks included in a specific zone is identical, the spiral tracks alternately have land and groove-shaped tracks in units of rounds, the index header is aligned at only a boundary between the land- and groove-shaped tracks, and the apparatus further comprises: tracking control means for controlling tracking to make a light beam track the land- and groove-shaped tracks by detecting the index header; and control means for controlling a disk rotational speed upon accessing a specific zone on the basis of a frequency reproduced from wobbles of the spiral tracks included in the specific zone (Fig. 2; See also column 5, lines 15-20).

With regard to claim 23, Flannagan et al shows an information reproduction method for reproducing information from a disk-shaped information recording medium which comprises: wobbled spiral tracks(Fig. 2, element 22; See also column 5, lines 15-20); and at least one index header (Fig. 2, element 23; See also column 6, lines 10-20) which is aligned in a radial direction of a disk to partially intercept the spiral tracks, and in which the spiral tracks have a plurality of recording fields each having a predetermined track length, each recording field has a header field and data field, the header field records address data, and the data field records user data, the method comprising the step of: reproducing target data (Fig. 1; See also column 10, lines 35-50) recorded in the data field of the recording field on the basis of the address data recorded in the header field of the recording field. Flannagan et al does not show the index header has address data recorded as an embossed pattern. However, Carré et al teaches that information is recorded in the form of an embossed pattern (Fig. 1; See also column 2, lines 30-35). Therefore, it would have been obvious to provide Flannagan et al with address data recorded as an embossed pattern as taught by Carré et al. The rationale is as follows: one of ordinary skill in the art at the time of

the invention would have been motivated to provide Flannagan et al with address data recorded as an embossed pattern as taught by Carré et al, in order to detect the position.

Regarding claim 24, see Figs. 1 and 2 of Flannagan et al which show a method according to claim 23, wherein the information recording medium has a plurality of concentric zones, each of the zones includes the wobbled spiral tracks, the number of wobbles per round of spiral tracks included in a specific zone is identical, the spiral tracks alternately have land- and groove-shaped tracks in units of rounds, the index header is aligned at only a boundary between the land- and groove-shaped tracks, and the method further comprises the steps of: controlling tracking to make a light beam track the land- and groove-shaped tracks by detecting the index header; and controlling a disk rotational speed upon accessing a specific zone on the basis of a frequency reproduced from wobbles of the spiral tracks included in the specific zone (Fig. 2; See also column 5, lines 15-20).

### *Cited References*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references are all related to an optical disk and an optical disk device.

### *Points of Contact*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimlien T Le whose telephone number is 703 305 3498. The examiner can normally be reached on M-F 8a.m-5p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 703 305 6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimlien Le

GEORGE J. LETSCHER
PRIMARY EXAMINER